

**ABSTRACT**

A fast and scalable pattern making engine is presented. The engine represents variations on a Shift-And method capable of matching patterns in data streams having high speed data rates. In one aspect of the invention high speed is achieved by accessing the pattern RAM in parallel. In another aspect, the input is likened to TDM and individual slots or channels are accessed separately. The two aspects can also be combined to provide a scalable and high speed pattern matching engine. The engine is adaptable to streams of known length or more complex expressions such as regular expressions with arbitrary length.